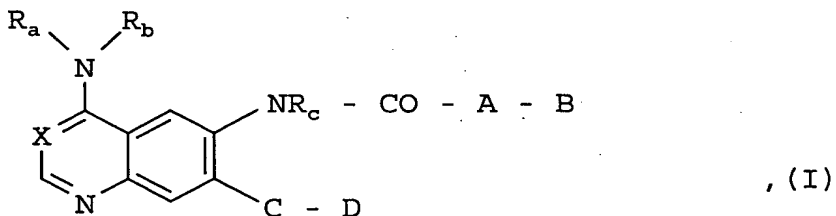


# Patent Claims

## 1. Bicyclic heterocycles of general formula



$R_a$  denotes a hydrogen atom or a methyl group,

$R_b$  denotes a phenyl, benzyl or 1-phenylethyl group, wherein the phenyl core is substituted in each case by the groups  $R_1$  to  $R_3$ , whilst

$R_1$  and  $R_2$ , which may be identical or different, each denote a hydrogen, fluorine, chlorine, bromine or iodine atom,

a methyl, ethyl, hydroxy, methoxy, ethoxy, amino, cyano, vinyl or ethynyl group,

an aryl, aryloxy, arylmethyl or arylmethoxy group,

a methyl or methoxy group substituted by 1 to 3 fluorine atoms or

$R_1$  together with  $R_2$ , if they are bound to adjacent carbon atoms, denote a  $-CH=CH-CH=CH-$ ,  $-CH=CH-NH-$  or  $-CH=N-NH-$  group and

$R_3$  denotes a hydrogen, fluorine, chlorine or bromine atom,

$R_c$  denotes a hydrogen atom or a methyl group,

X denotes a methyne group substituted by a cyano group or a nitrogen atom,

A denotes a 1,1- or 1,2-vinylene group, each of which may be substituted by one or two methyl groups or by a trifluoromethyl group,

an ethynylene group, or

a 1,3-butadien-1,4-ylene group optionally substituted by a methyl or trifluoromethyl group,

B denotes a hydrogen atom or a  $C_{1-4}$ -alkyl group, a methyl group substituted by 1 to 3 fluorine atoms, an ethyl group substituted by 1 to 5 fluorine atoms, a  $C_{1-4}$ -alkylcarbonyl, carboxy,  $C_{1-4}$ -alkoxycarbonyl, aminocarbonyl,  $C_{1-4}$ -alkylaminocarbonyl, di- $(C_{1-4}$ -alkyl)-aminocarbonyl, pyrrolidinocarbonyl, piperidinocarbonyl, morpholinocarbonyl or a 4- $(C_{1-4}$ -alkyl)-piperazinocarbonyl group, or

a  $C_{1-4}$ -alkyl group substituted by the group  $R_4$ , whilst

$R_4$  denotes a  $C_{1-4}$ -alkoxy group,

an amino group substituted by two  $C_{1-4}$ -alkyl groups, wherein the alkyl groups may be identical or different and each alkyl moiety may be substituted from position 2 by a  $C_{1-4}$ -alkoxy- or di- $(C_{1-4}$ -alkyl)-amino group or by a 4- to 7-membered alkyleneimino group, whilst in the above-mentioned 6- to 7-membered alkyleneimino groups in each case a methylene group may be replaced in the 4-position by an oxygen or sulphur atom, by a sulphinyl, sulphonyl or N- $(C_{1-4}$ -alkyl)-imino group,

a 4- to 7-membered alkyleneimino group optionally substituted by 1 to 4 methyl groups,

a 6- to 7-membered alkyleneimino group optionally substituted by 1 or 2 methyl groups, wherein in each case a methylene group in the 4-position is replaced by an oxygen or sulphur atom, by a sulphinyl, sulphonyl or N-(C<sub>1-2</sub>-alkyl)-imino group, or

an imidazolyl group optionally substituted by 1 to 3 methyl groups,

C denotes a C<sub>1-6</sub>-alkylene group, a -O-C<sub>1-6</sub>-alkylene group, whilst the alkylene moiety is linked to the group D, or an oxygen atom, which may not be linked to a nitrogen atom of the group D, and

D denotes a pyrrolidino group in which the two hydrogen atoms are replaced in the 2-position by a group E, wherein

E denotes a -CH<sub>2</sub>-O-CO-CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-O-CO-, -CH<sub>2</sub>-O-CO-CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-O-CO-CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-O-CO- bridge optionally substituted by one or two C<sub>1-2</sub>-alkyl groups,

a pyrrolidino group in which the two hydrogen atoms are replaced in the 3-position by a group F, wherein

F denotes a -O-CO-CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>-O-CO-CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-O-CO-, -O-CO-CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>-O-CO-CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-O-CO-CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-O-CO-, -O-CO-CH<sub>2</sub>-NR<sub>5</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-O-CO-CH<sub>2</sub>-NR<sub>5</sub>-, -O-CO-CH<sub>2</sub>-O-CH<sub>2</sub>- or -CH<sub>2</sub>-O-CO-CH<sub>2</sub>-O- bridge optionally substituted by one or two C<sub>1-2</sub>-alkyl groups, whilst

R<sub>5</sub> denotes a hydrogen atom or a C<sub>1-4</sub>-alkyl group,

a piperidino or hexahydroazepino group, wherein the two hydrogen atoms are replaced in the 2-position by a group E, where E is as hereinbefore defined,

a piperidino or hexahydroazepino group, wherein in each case the two hydrogen atoms in the 3-position or in the 4-position are replaced by a group F, where F is as hereinbefore defined,

a piperazino- or 4-(C<sub>1-4</sub>-alkyl)-piperazino group, wherein the two hydrogen atoms in the 2-position or in the 3-position of the piperazino ring are replaced by a group E, where E is as hereinbefore defined,

a pyrrolidino or piperidino group, wherein two vicinal hydrogen atoms are replaced by a -O-CO-CH<sub>2</sub>- -CH<sub>2</sub>-O-CO-, -O-CO-CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>-O-CO-CH<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-O-CO-, -O-CO-CH<sub>2</sub>-NR<sub>5</sub>- or -O-CO-CH<sub>2</sub>-O- bridge optionally substituted by one or two C<sub>1-2</sub>-alkyl groups, whilst R<sub>5</sub> is as hereinbefore defined and the heteroatoms of the above-mentioned bridges are not bound to the 2- or 5-position of the pyrrolidino ring and are not bound to the 2- or 6-position of the piperidino ring,

a piperazino or 4-(C<sub>1-4</sub>-alkyl)-piperazino group, wherein a hydrogen atom in the 2-position together with a hydrogen atom in the 3-position of the piperazino ring are replaced by a -CH<sub>2</sub>-O-CO-CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>-O-CO- bridge optionally substituted by one or two C<sub>1-2</sub>-alkyl groups,

a piperazino group in which a hydrogen atom in the 3-position together with the hydrogen atom in the 4-position are replaced by a -CO-O-CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>-O-CO-CH<sub>2</sub>- bridge optionally substituted by one or two C<sub>1-2</sub>-alkyl groups, whilst in each case the left-hand end of the above-mentioned bridges is bound to the 3-position of the piperazino ring,

a pyrrolidino, piperidino or hexahydroazepino group substituted by the group R<sub>6</sub>, wherein

R<sub>6</sub> denotes a 2-oxo-tetrahydrofuran-2-yl, 2-oxo-tetrahydropyran-2-yl, 2-oxo-1,4-dioxan-2-yl or 2-oxo-4-(C<sub>1-4</sub>-alkyl)-

morpholinyl group optionally substituted by one or two C<sub>1-2</sub>-alkyl groups,

a pyrrolidino group substituted in the 3-position by a 2-oxo-morpholino group, whilst the 2-oxo-morpholino group may be substituted by one or two C<sub>1-2</sub>-alkyl groups,

a piperidino or hexahydroazepino group substituted in the 3- or 4-position by a 2-oxo-morpholino group, whilst the 2-oxo-morpholino group may be substituted by one or two C<sub>1-2</sub>-alkyl groups,

a 4-(C<sub>1-4</sub>-alkyl)-piperazino or 4-(C<sub>1-4</sub>-alkyl)-homopiperazino group substituted at a ring nitrogen atom by R<sub>6</sub>, wherein R<sub>6</sub> is as hereinbefore defined,

a piperazino or homopiperazino group substituted in the 4-position by the group R<sub>7</sub>, wherein

R<sub>7</sub> denotes a 2-oxo-tetrahydrofuran-3-yl, 2-oxo-tetrahydrofuran-4-yl, 2-oxo-tetrahydropyran-3-yl, 2-oxo-tetrahydropyran-4-yl or 2-oxo-tetrahydropyran-5-yl group optionally substituted by one or two C<sub>1-2</sub>-alkyl groups,

a pyrrolidino group substituted in the 3-position by a (R<sub>5</sub>NR<sub>7</sub>)-, R<sub>7</sub>O-, R<sub>7</sub>S-, R<sub>7</sub>SO- or R<sub>7</sub>SO<sub>2</sub>- group, whilst R<sub>5</sub> and R<sub>7</sub> are as hereinbefore defined,

a piperidino or hexahydroazepino group substituted in the 3- or 4-position by a (R<sub>5</sub>NR<sub>7</sub>)-, R<sub>7</sub>O-, R<sub>7</sub>S-, R<sub>7</sub>SO- or R<sub>7</sub>SO<sub>2</sub>- group, wherein R<sub>5</sub> and R<sub>7</sub> are as hereinbefore defined,

a pyrrolidino, piperidino or hexahydroazepino group substituted by a R<sub>6</sub>-C<sub>1-4</sub>-alkyl-, (R<sub>5</sub>NR<sub>7</sub>)-C<sub>1-4</sub>-alkyl-, R<sub>7</sub>O-C<sub>1-4</sub>-alkyl-, R<sub>7</sub>S-C<sub>1-4</sub>-alkyl-, R<sub>7</sub>SO-C<sub>1-4</sub>-alkyl-, R<sub>7</sub>SO<sub>2</sub>-C<sub>1-4</sub>-alkyl- or (R<sub>5</sub>NR<sub>7</sub>)-CO- group, wherein R<sub>5</sub> to R<sub>7</sub> are as hereinbefore defined,

a pyrrolidino group substituted in the 3-position by a  $R_6$ -CO-NR<sub>4</sub>,  $R_6$ -C<sub>1-4</sub>-alkylene-CONR<sub>4</sub>, (R<sub>5</sub>NR<sub>7</sub>)-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, R<sub>7</sub>O-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, R<sub>7</sub>S-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, R<sub>7</sub>SO-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, R<sub>7</sub>SO<sub>2</sub>-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, 2-oxo-morpholino-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>,  $R_6$ -C<sub>1-4</sub>-alkylene-Y or C<sub>2-4</sub>-alkyl-Y group, whilst the C<sub>2-4</sub>-alkyl moiety of the C<sub>2-4</sub>-alkyl-Y group is substituted in each case from position 2 by a (R<sub>5</sub>NR<sub>7</sub>)-, R<sub>7</sub>O-, R<sub>7</sub>S-, R<sub>7</sub>SO- or R<sub>7</sub>SO<sub>2</sub>- group and the 2-oxo-morpholino moiety may be substituted by one or two C<sub>1-2</sub>-alkyl groups, wherein

R<sub>5</sub> to R<sub>7</sub> are as hereinbefore defined and

Y denotes an oxygen or sulphur atom, an imino,  
N-(C<sub>1-4</sub>-alkyl)-imino, sulphinyl or sulphonyl group,

a piperidino- or hexahydroazepino group substituted in the 3- or 4-position by a  $R_6$ -CO-NR<sub>5</sub>,  $R_6$ -C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, (R<sub>5</sub>NR<sub>7</sub>)-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, R<sub>7</sub>O-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, R<sub>7</sub>S-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, R<sub>7</sub>SO-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, R<sub>7</sub>SO<sub>2</sub>-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>, 2-oxo-morpholino-C<sub>1-4</sub>-alkylene-CONR<sub>5</sub>,  $R_6$ -C<sub>1-4</sub>-alkylene-Y or C<sub>2-4</sub>-alkyl-Y group, wherein Y is as hereinbefore defined, the 2-oxo-morpholino moiety may be substituted by one or two C<sub>1-2</sub>-alkyl groups and the C<sub>2-4</sub>-alkyl moiety of the C<sub>2-4</sub>-alkyl-Y group is substituted in each case from position 2 by a (R<sub>5</sub>NR<sub>7</sub>)-, R<sub>7</sub>O-, R<sub>7</sub>S-, R<sub>7</sub>SO- or R<sub>7</sub>SO<sub>2</sub>- group, whilst R<sub>5</sub> to R<sub>7</sub> are as hereinbefore defined,

a 4-(C<sub>1-4</sub>-alkyl)-piperazino or 4-(C<sub>1-4</sub>-alkyl)-homopiperazino group substituted at a ring nitrogen atom by a  $R_6$ -C<sub>1-4</sub>-alkyl-, (R<sub>5</sub>NR<sub>7</sub>)-C<sub>1-4</sub>-alkyl-, R<sub>7</sub>O-C<sub>1-4</sub>-alkyl-, R<sub>7</sub>S-C<sub>1-4</sub>-alkyl-, R<sub>7</sub>SO-C<sub>1-4</sub>-alkyl-, R<sub>7</sub>SO<sub>2</sub>-C<sub>1-4</sub>-alkyl- or R<sub>5</sub>NR<sub>7</sub>-CO- group, wherein R<sub>5</sub> to R<sub>7</sub> are as hereinbefore defined,

a piperazino or homopiperazino group substituted in the 4-position by a  $R_6$ -C<sub>1-4</sub>-alkyl-,  $R_6$ -CO-,  $R_6$ -C<sub>1-4</sub>-alkylene-CO-, (R<sub>5</sub>NR<sub>7</sub>)-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>O-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>S-C<sub>1-4</sub>-alkylene-

CO-,  $R_7SO-C_{1-4}$ -alkylene-CO- or  $R_7SO_2-C_{1-4}$ -alkylene-CO- group, wherein  $R_5$  to  $R_7$  are as hereinbefore defined,

a piperazino or homopiperazino group substituted in the 4-position by a  $C_{2-4}$ -alkyl group, wherein the  $C_{2-4}$ -alkyl group is substituted in each case from position 2 by an  $(R_5NR_7)-$ ,  $R_7O-$ ,  $R_7S-$ ,  $R_7SO-$  or  $R_7SO_2-$  group, whilst  $R_5$  and  $R_7$  are as hereinbefore defined,

a pyrrolidino, piperidino- or hexahydroazepino group substituted by a 2-oxo-morpholino- $C_{1-4}$ -alkyl group, wherein the 2-oxo-morpholino moiety may be substituted by one or two  $C_{1-2}$ -alkyl groups,

a pyrrolidino group, substituted in the 3-position by a  $C_{2-4}$ -alkyl-Y group, wherein Y is as hereinbefore defined and the  $C_{2-4}$ -alkyl moiety of the  $C_{2-4}$ -alkyl-Y group is substituted in each case from position 2 by a 2-oxo-morpholino group optionally substituted by one or two  $C_{1-2}$ -alkyl groups,

a piperidino or hexahydroazepino group substituted in the 3- or 4-position by a  $C_{2-4}$ -alkyl-Y group, wherein Y is as hereinbefore defined and the  $C_{2-4}$ -alkyl moiety of the  $C_{2-4}$ -alkyl-Y group is substituted in each case from position 2 by a 2-oxo-morpholino group optionally substituted by one or two  $C_{1-2}$ -alkyl groups,

a 4-( $C_{1-4}$ -alkyl)-piperazino- or 4-( $C_{1-4}$ -alkyl)-homopiperazino group substituted at a ring nitrogen atom by a 2-oxo-morpholino- $C_{1-4}$ -alkyl group, wherein the 2-oxo-morpholino moiety may be substituted by one or two  $C_{1-2}$ -alkyl groups,

a piperazino or homopiperazino group substituted in the 4-position by a 2-oxo-morpholino- $C_{1-4}$ -alkylene-CO group, wherein the 2-oxo-morpholino moiety may be substituted by one or two  $C_{1-2}$ -alkyl groups,

a piperazino or homopiperazino group substituted in the 4-position by a C<sub>2-4</sub>-alkyl group, wherein the C<sub>2-4</sub>-alkyl moiety is substituted in each case from position 2 by a 2-oxo-morpholino group optionally substituted by one or two C<sub>1-2</sub>-alkyl groups,

a pyrrolidinyl or piperidinyl group substituted in the 1-position by the group R<sub>7</sub>, by a R<sub>6</sub>-C<sub>1-4</sub>-alkyl-, R<sub>6</sub>-CO-, R<sub>6</sub>-C<sub>1-4</sub>-alkylene-CO-, (R<sub>5</sub>NR<sub>7</sub>)-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>O-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>S-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>SO-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>SO<sub>2</sub>-C<sub>1-4</sub>-alkylene-CO- or 2-oxo-morpholino-C<sub>1-4</sub>-alkylene-CO- group, wherein R<sub>5</sub> to R<sub>7</sub> are as hereinbefore defined and the 2-oxo-morpholino moiety may be substituted by one or two C<sub>1-2</sub>-alkyl groups,

a pyrrolidinyl or piperidinyl group substituted in the 1-position by a C<sub>2-4</sub>-alkyl group, wherein the C<sub>2-4</sub>-alkyl moiety is substituted in each case from position 2 by a (R<sub>5</sub>NR<sub>7</sub>)-, R<sub>7</sub>O-, R<sub>7</sub>S-, R<sub>7</sub>SO-, R<sub>7</sub>SO<sub>2</sub>- or 2-oxo-morpholino group, whilst R<sub>5</sub> and R<sub>7</sub> are as hereinbefore defined and the 2-oxo-morpholino moiety may be substituted by one or two C<sub>1-2</sub>-alkyl groups,

a pyrrolidin-3-yl-NR<sub>5</sub>, piperidin-3-yl-NR<sub>5</sub> or piperidin-4-yl-NR<sub>5</sub> group substituted at the ring nitrogen atom in each case by the group R<sub>7</sub>, by a R<sub>6</sub>-C<sub>1-4</sub>-alkyl-, R<sub>6</sub>-CO-, R<sub>6</sub>-C<sub>1-4</sub>-alkylene-CO-, (R<sub>5</sub>NR<sub>7</sub>)-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>O-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>S-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>SO-C<sub>1-4</sub>-alkylene-CO-, R<sub>7</sub>SO<sub>2</sub>-C<sub>1-4</sub>-alkylene-CO- or 2-oxo-morpholino-C<sub>1-4</sub>-alkylene-CO- group, wherein R<sub>5</sub> to R<sub>7</sub> are as hereinbefore defined and the 2-oxo-morpholino moiety may be substituted by one or two C<sub>1-2</sub>-alkyl groups,

a pyrrolidin-3-yl-NR<sub>5</sub>, piperidin-3-yl-NR<sub>5</sub> or piperidin-4-yl-NR<sub>5</sub> group substituted in each case at the ring nitrogen atom by a C<sub>2-4</sub>-alkyl group, wherein the C<sub>2-4</sub>-alkyl moiety is substituted in each case from position 2 by a (R<sub>5</sub>NR<sub>7</sub>)-, R<sub>7</sub>O-, R<sub>7</sub>S-, R<sub>7</sub>SO-, R<sub>7</sub>SO<sub>2</sub>- or 2-oxo-morpholino group, whilst R<sub>5</sub> and R<sub>7</sub> are as hereinbefore defined and the 2-oxo-morpholino moiety may be substituted by one or two C<sub>1-2</sub>-alkyl groups,



a  $R_6$ - $C_{1-4}$ -alkylene- $NR_5$  group in which  $R_5$  and  $R_6$  are as hereinbefore defined, or

a  $C_{2-4}$ -alkyl- $NR_4$  group, wherein the  $C_{2-4}$ -alkyl moiety is substituted in each case from position 2 by a  $(R_5NR_7)-$ ,  $R_7O-$ ,  $R_7S-$ ,  $R_7SO-$ ,  $R_7SO_2-$  or 2-oxo-morpholino group, whilst  $R_5$  and  $R_7$  are as hereinbefore defined and the 2-oxo-morpholino moiety may be substituted by one or two  $C_{1-2}$ -alkyl groups,

a 2-oxo-morpholin-4-yl group substituted by the group  $R_8$  or by the group  $R_8$  and a  $C_{1-4}$ -alkyl group, whilst

$R_8$  denotes a  $C_{3-4}$ -alkyl, hydroxy- $C_{1-4}$ -alkyl,  $C_{1-4}$ -alkoxy- $C_{1-4}$ -alkyl, di- $(C_{1-4}$ -alkyl)-amino- $C_{1-4}$ -alkyl, pyrrolidino- $C_{1-4}$ -alkyl, piperidino- $C_{1-4}$ -alkyl, morpholino- $C_{1-4}$ -alkyl, 4- $(C_{1-4}$ -alkyl)-piperazino- $C_{1-4}$ -alkyl,  $C_{1-4}$ -alkylsulphanyl- $C_{1-4}$ -alkyl,  $C_{1-4}$ -alkylsulphinyl- $C_{1-4}$ -alkyl,  $C_{1-4}$ -alkylsulphonyl- $C_{1-4}$ -alkyl, cyan- $C_{1-4}$ -alkyl,  $C_{1-4}$ -alkoxycarbonyl- $C_{1-4}$ -alkyl, aminocarbonyl- $C_{1-4}$ -alkyl,  $C_{1-4}$ -alkyl-aminocarbonyl- $C_{1-4}$ -alkyl, di- $(C_{1-4}$ -alkyl)-aminocarbonyl- $C_{1-4}$ -alkyl, pyrrolidino-carbonyl- $C_{1-4}$ -alkyl, piperidinocarbonyl- $C_{1-4}$ -alkyl, morpholinocarbonyl- $C_{1-4}$ -alkyl or a 4- $(C_{1-4}$ -alkyl)-piperazino-carbonyl- $C_{1-4}$ -alkyl group,

a 2-oxo-morpholin-4-yl group substituted by two groups  $R_8$ , whilst  $R_8$  is as hereinbefore defined and the two groups  $R_8$  may be identical or different,

a 2-oxo-morpholin-4-yl group in which the two hydrogen atoms of a methylene group are replaced by a  $-(CH_2)_m-$ ,  $-CH_2-Y-CH_2-$ ,  $-CH_2-Y-CH_2-CH_2-$ ,  $-CH_2CH_2-Y-CH_2CH_2-$  or  $-CH_2CH_2-Y-CH_2CH_2CH_2-$  bridge optionally substituted by one or two  $C_{1-2}$ -alkyl groups, whilst

$m$  denotes the number 2, 3, 4, 5 or 6 and

$Y$  denotes an oxygen or sulphur atom, a sulphinyl, sulphonyl or  $C_{1-4}$ -alkylimino group,

a 2-oxo-morpholin-4-yl group in which a hydrogen atom in the 5-position together with a hydrogen atom in the 6-position is replaced by a  $-(CH_2)_n-$ ,  $-CH_2-Y-CH_2-$ ,  $-CH_2-Y-CH_2CH_2-$  or  $-CH_2-CH_2-Y-CH_2-$  bridge, whilst

Y is as hereinbefore defined and  
n denotes the number 2, 3 or 4,

whilst, unless otherwise stated, the aryl moieties mentioned in the definitions of the above-mentioned groups denote a phenyl group which may be mono- or disubstituted by  $R_9$ , whilst the substituents may be identical or different and

$R_9$  denotes a fluorine, chlorine, bromine or iodine atom, a  $C_{1-2}$ -alkyl, trifluoromethyl or  $C_{1-2}$ -alkoxy group, or

two groups  $R_9$ , if they are bound to adjacent carbon atoms, together denote a  $C_{3-4}$ -alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

the tautomers, stereoisomers and the salts thereof.

2. Bicyclic heterocycles of general formula I according to claim 1, wherein

$R_a$  denotes a hydrogen atom,

$R_b$  denotes a 1-phenylethyl, 3-methylphenyl, 3-chlorophenyl, 3-bromophenyl or 3-chloro-4-fluorophenyl group,

$R_c$  denotes a hydrogen atom,

X denotes a nitrogen atom,

A denotes a 1,2-vinylene or ethynylene group,

B denotes a hydrogen atom,

C denotes a  $-O-CH_2CH_2-$  or  $-O-CH_2CH_2CH_2-$  group, whilst the alkylene moiety in each case is linked to the group D, and

D denotes a piperidino group in which the two hydrogen atoms in the 4-position are replaced by a  $-CH_2-O-CO-CH_2-$ ,  $-CH_2CH_2-O-CO-$ ,  $-CH_2CH_2-O-CO-CH_2-$ ,  $-O-CO-CH_2-NCH_3-CH_2-$  or  $-O-CO-CH_2-O-CH_2-$  bridge,

a piperazino group in which a hydrogen atom in the 3-position together with the hydrogen atom in the 4-position are replaced by a  $-CO-O-CH_2-CH_2-$  or  $-CH_2-O-CO-CH_2-$  bridge, whilst in each case the left-hand ends of the above-mentioned bridges are bound to the 3-position of the piperazino ring,

a piperidino group which is substituted in the 4-position by a 2-oxo-morpholino or 2-oxo-morpholinomethyl group, whilst the 2-oxo-morpholino moiety may be substituted in each case by one or two methyl groups,

a piperazino group which is substituted in the 4-position by a 2-oxo-tetrahydrofuran-3-yl- or 2-oxo-tetrahydrofuran-4-yl group,

a piperidino group which is substituted in the 4-position by a  $R_6S$  group, whilst

$R_6$  denotes a 2-oxo-tetrahydrofuran-3-yl or 2-oxo-tetrahydrofuran-4-yl group,

a piperazino group which is substituted in the 4-position by a 2-oxo-tetrahydrofuranylmethyl or 2-oxo-tetrahydrofuranylmethyl carbonyl group,

a piperazino group which is substituted in the 4-position by a [2-(2-oxo-tetrahydrofuran-3-ylsulphenyl)ethyl] group,

a piperidin-4-yl group which is substituted in the 1-position by a 2-oxo-tetrahydrofuran-3-yl or 2-oxo-tetrahydrofuran-4-yl group,

a 2-oxo-morpholin-4-yl group which is substituted by a methoxymethyl or methoxyethyl group,

a 2-oxo-morpholin-4-yl group in which the two hydrogen atoms of a methylene group are replaced by a  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2-\text{O}-\text{CH}_2\text{CH}_2-$  or  $-\text{CH}_2\text{CH}_2-\text{O}-\text{CH}_2\text{CH}_2-$  bridge,

the tautomers, stereoisomers and the salts thereof.

3. Bicyclic heterocycles of general formula I according to claim 1, wherein

$R_a$  denotes a hydrogen atom,

$R_b$  denotes a 1-phenylethyl or 3-chloro-4-fluorophenyl group,

$R_c$  denotes a hydrogen atom,

X denotes a nitrogen atom,

A denotes a 1,2-vinylene group,

B denotes a hydrogen atom,

C denotes a  $-\text{O}-\text{CH}_2\text{CH}_2-$  or  $-\text{O}-\text{CH}_2\text{CH}_2\text{CH}_2-$  group, whilst the alkylene moiety in each case is linked to the group D, and

D denotes a piperazino group which is substituted in the 4-position by a 2-oxo-tetrahydrofuran-4-yl or 2-oxo-tetrahydrofuran-5-ylcarbonyl group,

the tautomers, stereoisomers and the salts thereof.

4. The following compounds of general formula I according to claim 1:

(1) 4-[(3-chloro-4-fluorophenyl)amino]-7-{3-[4-(2-oxo-tetrahydrofuran-4-yl)-piperazin-1-yl]-propyloxy}-6-[(vinylcarbonyl)amino]-quinazoline,

(2) 4-[(3-chloro-4-fluorophenyl)amino]-7-(2-{4-[(S)-(2-oxo-tetrahydrofuran-5-yl)carbonyl]-piperazin-1-yl}-ethoxy)-6-[(vinylcarbonyl)amino]-quinazoline,

(3) 4-[(R)-(1-phenylethyl)amino]-7-{2-[4-(2-oxo-tetrahydrofuran-4-yl)-piperazin-1-yl]-ethoxy}-6-[(vinylcarbonyl)amino]-quinazoline and

(4) 4-[(3-chloro-4-fluorophenyl)amino]-7-{2-[4-(2-oxo-tetrahydrofuran-4-yl)-piperazin-1-yl]-ethoxy}-6-[(vinylcarbonyl)amino]-quinazoline,

the tautomers, stereoisomers and the salts thereof.

5. Physiologically acceptable salts of the compounds according to at least one of claims 1 to 4 with inorganic or organic acids or bases.

6. Pharmaceutical compositions containing a compound according to at least one of claims 1 to 4 or a physiologically acceptable salt according to claim 5 optionally together with one or more inert carriers and/or diluents.

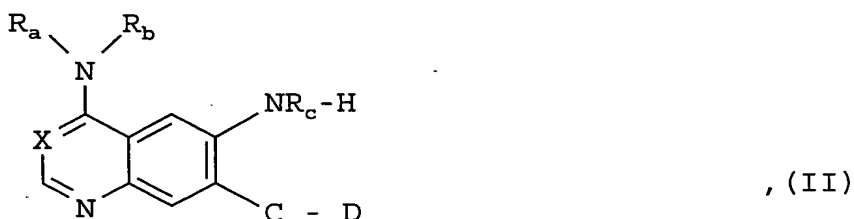
7. Use of a compound according to at least one of claims 1 to 5 for preparing a pharmaceutical composition which is suitable for the treatment of benign or malignant tumours, for preventing and treating diseases of the respiratory tract and lungs, for treating polyps, diseases of the gastro-intestinal

tract, bile duct and gall bladder as well as the kidneys and skin.

8. Process for preparing a pharmaceutical composition according to claim 6, characterised in that a compound according to at least one of claims 1 to 5 is incorporated in one or more inert carriers and/or diluents by a non-chemical method.

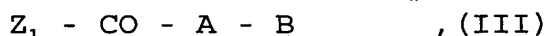
9. Process for preparing the compounds of general formula I according to at least one of claims 1 to 5, characterised in that

a) a compound of general formula



wherein

$R_a$  to  $R_c$ , C, D and X are defined as in claims 1 to 4, is reacted with a compound of general formula



wherein

A and B are defined as in claims 1 to 4 and  $Z_1$  denotes a leaving group, and

if necessary any protecting group used in the reactions described above is cleaved again and/or

if desired a compound of general formula I thus obtained is resolved into its stereoisomers and/or

a compound of general formula I thus obtained is converted into the salts thereof, particularly, for pharmaceutical use, into the physiologically acceptable salts thereof.